

# Odyssey of the Eyes

## Advanced Level



Welcome

Introduction

Protocols

Learning Activities

Appendix

### **Purpose**

To help students understand the connection between remote sensing technology, computer imagery and land cover assessment and to demonstrate how a satellite sensor relates information to a computer

### **Overview**

Students translate their maps into digital code and exchange the digitized versions of their maps with students in another school or classroom for translation into a color map. Each group of students recreates the original image's land cover types.

### **Student Outcomes**

#### **Science Content**

##### *Science and Technology*

- Clear communication is an essential part of doing science.
- Communications involves coding and decoding.
- Tables, graphs and symbols are alternative ways of representing data.

##### *Geography*

##### Primary

- Maps and satellite-produced images

##### *Enrichment*

- Image display is accomplished by conversion of stored data to a user-defined color-coded image.

### **Scientific Inquiry Abilities**

- Observe, interpret and classify an image using the data given.
- Analyze how the image interpretation might differ between groups.

### **Level**

All

### **Time**

Three to four class periods

### **Materials and Tools**

- Graph paper
- Colored pencils
- Digitized map/image produced from Part 2 of *Odyssey of the Eyes Intermediate Level*
- Internet (optional)

### **Preparation**

- Assemble the materials.
- Contact another classroom or school to exchange digitized maps with.

### **Prerequisites**

The *Odyssey of the Eyes Beginning* and *Intermediate Levels* are necessary to complete this activity.

**Note:** This activity presents concepts similar to those in steps 8, 9, and 10 of the *Relative and Absolute Directions Learning Activity* in the *GPS Investigation*.

## What To Do and How To Do It

1. In the previous activity, *Odyssey of the Eyes Intermediate Level*, students translated their map models into a digitized code. Type this digitized code into a word processor. Use “0” to begin and end each line of the map. Allow the numbers to “word wrap” on the screen so that the map pattern is not visible in the message.

### Example:

011112200111133002464340024644400255655004444444001111220011113300111133  
001111220011113300111133002464340024644400255655004444444001111220011113  
300246434002464440025565500246434002464440025565500444444400111122002556  
550044444440011112200111133001111330011112200111133001111330024643400246  
44400255655004444444001111220

2. Include the key (from the *Odyssey of the Eyes Digitized Data Sheet*) to translate the codes to colors.

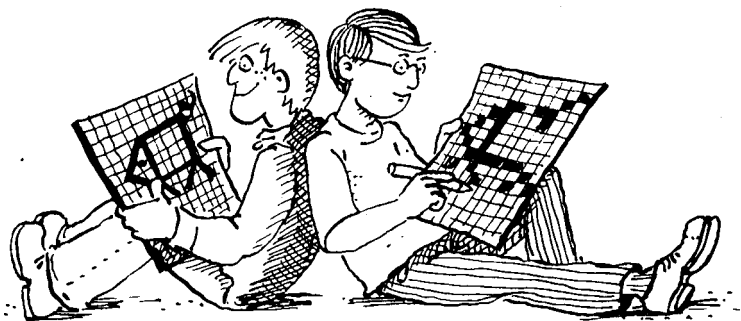
### Example:

- 1 violet
- 2 indigo
- 3 green
- 4 yellow
- 5 orange
- 6 red

3. Exchange keys and digitized codes with students in another class or school. This exchange can be done on the Internet, by exchanging disks between schools or classes, or just by exchanging hard copies of the information.
4. Once your students receive the code from the other school or class, translate it into a color map using the key. Your students will produce a false color image.
5. Return the completed maps to the sending school for verification.

## Discussion

1. What are the dominant land cover types on your false-color image?
2. Can you recreate a sketch of a map or a model of the area from the false-color image?



Source: Jan Smolik, 1996, TEREZA, Association for Environmental Education, Czech Republic